amount of N2 gas of the solid electrolyte layer at room temperature is not more than 10-5 cc/g.second. A permeation coefficient of the solid electrolyte layer is preferably not more than 10-7 cm4/g.second at room temperature. The solid electrolyte layer includes at least one metal element selected from manganese, iron, cobalt, nickel,copper and zinc, in an average amount of not less than 1 atom % and not more than 15 atom % based on a sum of amounts of all metal elements contained in the solid electrolyte layer.

5527634

MULTIPLE MANIFOLD FUEL CELL

Meacham G B Kirby Shaker Heights, OH, UNITED STATES assigned to Electric Power Research Institute Inc

PCT No. PCT/US93/01409 Sec. 371 Date Oct. 12, 1994 Sec. 102(e) Date Oct. 12, 1994 PCT Filed Feb. 17, 1993 PCT Pub. No. WO93/17465 PCT Pub. Date Sep. 2, 1993. The invention provides fuel cells and fuel cell stacks having a plurality of manifolds for providing reactive gases to cell layers. The manifolds are distributed across the planar area of the cells whereby the flow path lengths are reduced to the point that current collectors are not required. Substantial stack volume, cost and contact resistance reductions are also realized.

5527635

SOLID-ELECTROLYTE FUEL CELL ELECTRODE MATERIAL AND ELECTRODE USING SAME

Tsukamoto Koichi; Uchiyama Futoshi; Yanagisawa Takeshi; Okuo Takayasu; Kaga Yasuo Tokyo, JAPAN assigned to Agency of Industrial Science & Technology Ministry of International Trade & Industry

Solid-electrolyte fuel cell electrode material in the form of a membrane formed on a solid electrolyte surface from a powder obtained by pulverizing a sintered body obtained by sintering a mixture of lanthanum-based electrode material and 5 to 50 mol % platinum.

529855

STRUCTURE FOR WETTING DIAPHRAGM OF SOLID POLYMER ELECTOLYTE ELECTROCHEMICAL CELL AND PROCESS OF PREPARING SAME

Watanabe Masahiro Wadamachi, Kofu shi, Yamanashi, JAPAN assigned to Tanaka Kikinzoku Kogyo K K; Watanabe Masahiro

Disclosed is a structure for wetting a diaphragm of a solid polymer electrolyte fuel cell in which one or more hollow paths are provided in or on the diaphragm for supplying water to the solid polymer electrolyte. According to the structure of this invention, the elevation of performances of the above cell is achieved by wetting the diaphragm at a desired level. Since the water can be supplied through the hollow paths with substantially no resistance, the amount to be supplied can be freely controlled.

5529856

FUEL CELL HAVING SOLIDIFIED PLASMA COMPONENTS

Petri Randy J; Ong Estela T Crete, IL, UNITED STATES assigned to Electric Power Research Institute

Fuel cells, fuel cell components, and other electrochemical devices and components fabricated by plasma spraying. Devices such as fuel cells may be made by plasma spraying and then assembling individual components or by plasma spraying components on other components to form a laminate.

5531019

SOLID OXIDE FUEL CELL AND MANUFACTURING METHOD THEREOF

Taira Hiroak; Iha Michiaki; Takagi Hiroshi Nagaokakyo, JAPAN assigned to Murata Manufacturing Co Ltd